TOYOTOMI

Service Manual

MODEL:

DCT 100HSPi-o
DCT 140HSPi-o
DCT 170HSPi-o

Part 1 General information……..……

Part 2 Indoor units…….……..……

Part 3 Outdoor units……..……

Part 4 Installation……..…….……..……

Part 5 Control……..……

Part 1
General Information

1. Model names of Indoor/Outdoor Units……

2. External Appearance……

3. Nomenclature……

4. Features……..

1. Model Names of Indoor/ Outdoor Units

Model Names of Indoor Units:

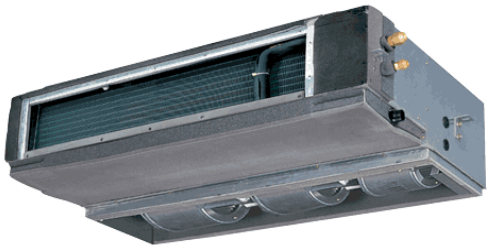
DCT 100HSPi, DCT 140HSPi, DCT 170HSPi

Model Names of Outdoor Units:

DCT 100HSPo, DCT 140HSPo, DCT 170HSPo

2. External Appearance

Indoor units



4. Features

The dimension is really more compact than the former type MHA series;

4.2 High-static pressure;

4.3 Multi-blowing outlets, to satisfy your fitment’s needs;

4.4 Indoor Unit can be installed in various ways to give you a creative space;

4.5 We adopt universal outdoor units for R410A refrigerant.

Part 2
Indoor units

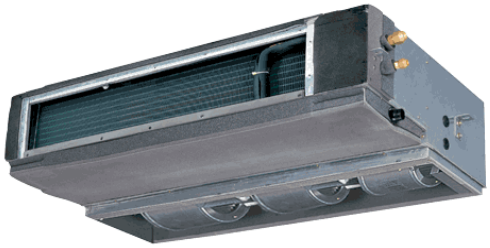
High Static Pressure Type……..

High Static Pressure Type

1. Features……7
2. Dimensions……14
3. Service space……16
4. Piping diagrams……17
5. Wiring diagrams……18
6. Air Velocity and Temperature Distributions……29
7. Electric Characteristics……30
8. Sound Levels……31
9. Exploded view……33
10. Static pressure……36
11. Accessories……38

1. Features

1.1 The new designed high static pressure duct adopt the body of new concealed duct DCT 100HSPi, DCT 140HSPi, DCT 170HSPi; the dimension is really more compact than the former type HSP series.



1.2 High-static pressure

Blowing pressure of Indoor Unit can reach 150Pa. The air conditioner delivers cold wind to every indoor corner even the ceiling is super-high.

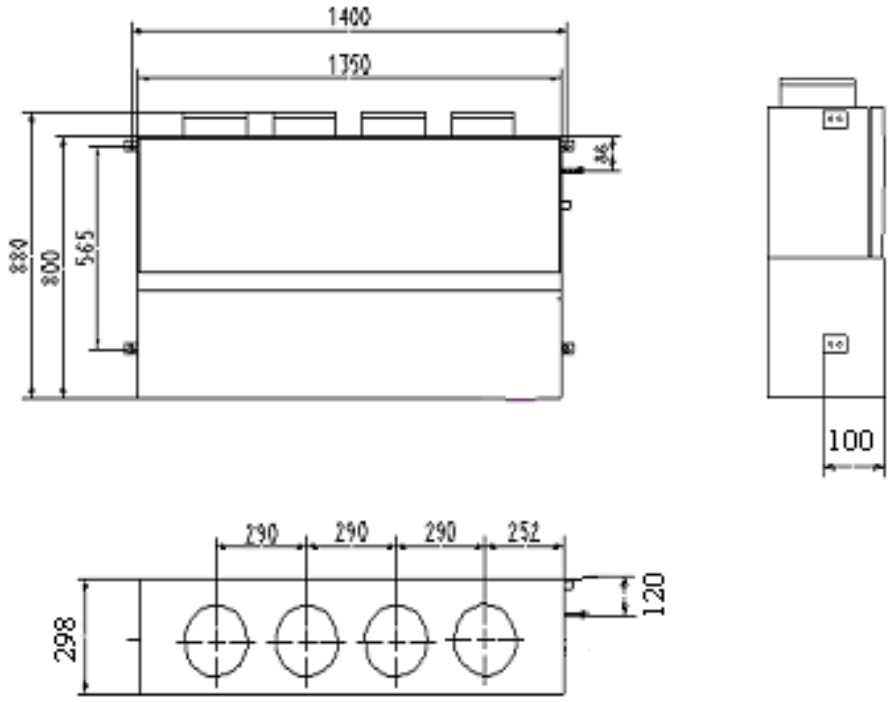
1.3 Multi-blowing outlets, to satisfy your fitment's needs.

1.4 Indoor Unit can be installed in various ways to give you a creative space.

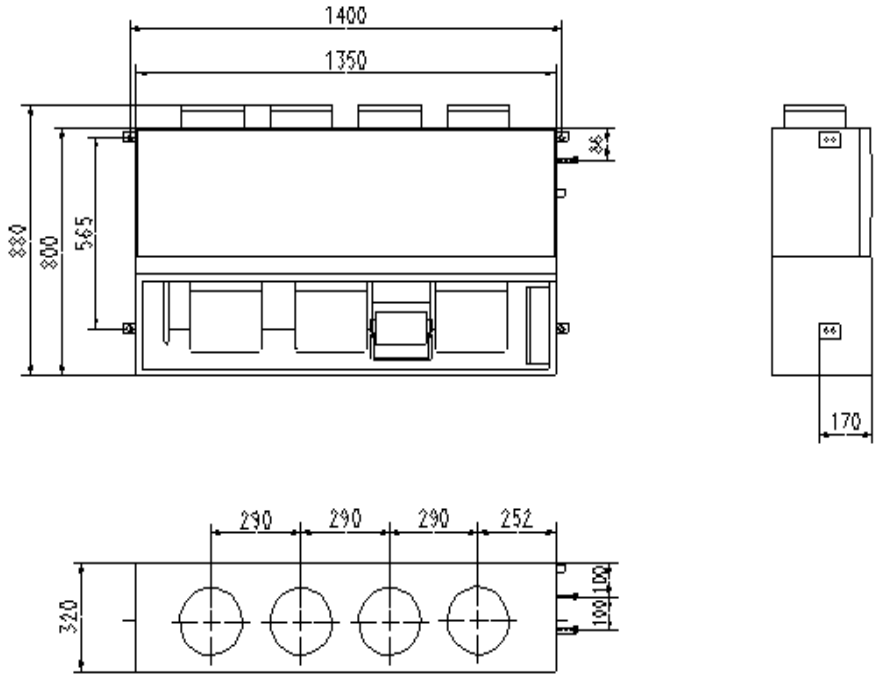
1.5 We adopt universal outdoor units for R410A refrigerant.

2.Dimensions

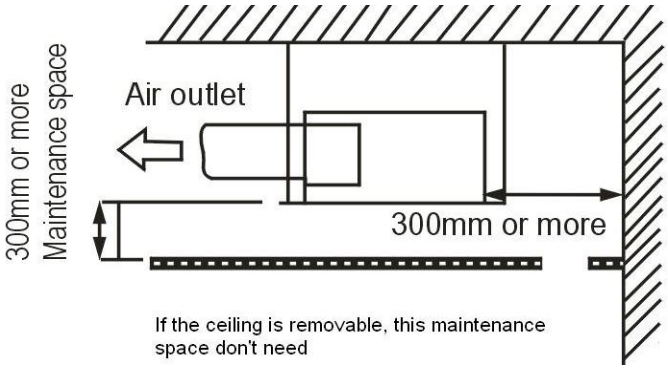
2.2. DCT 100HSPi



2.3. DCT 140HSPi, DCT 170HSPi

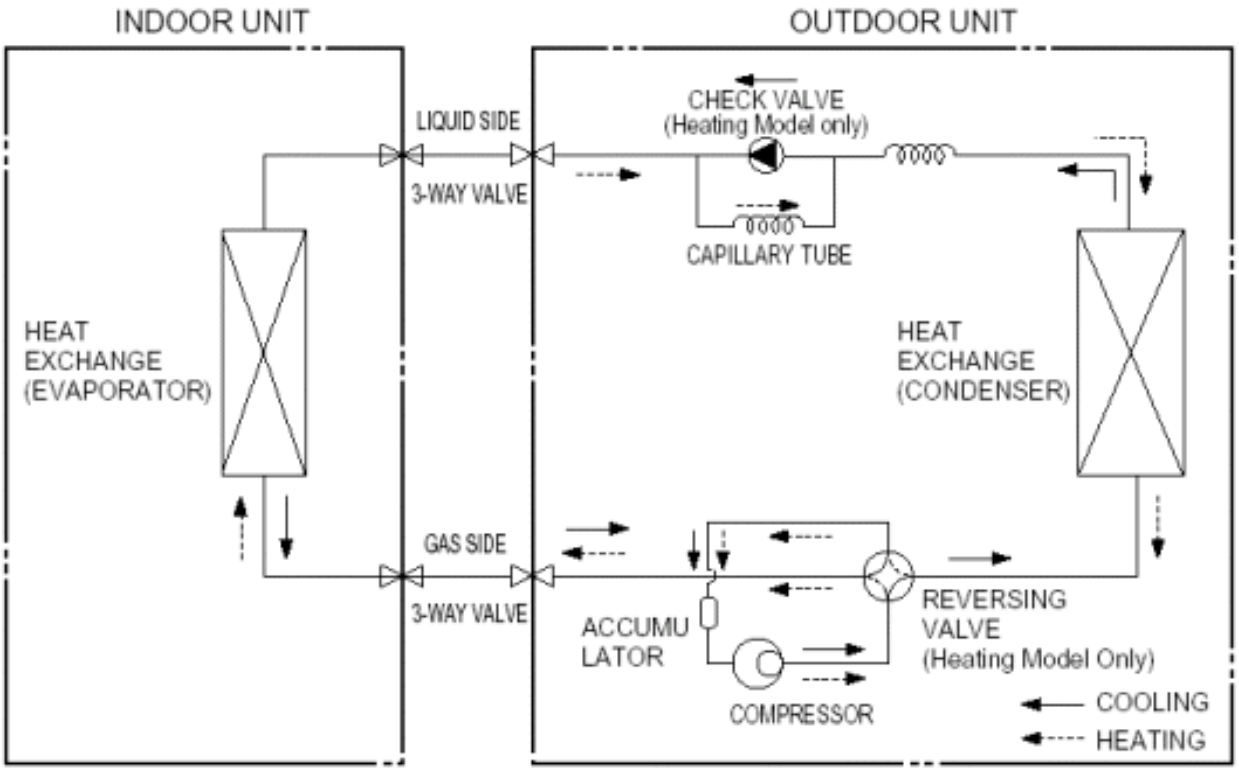


3. Service space



Note: Above figure means minimum value. Please keep these value at least.

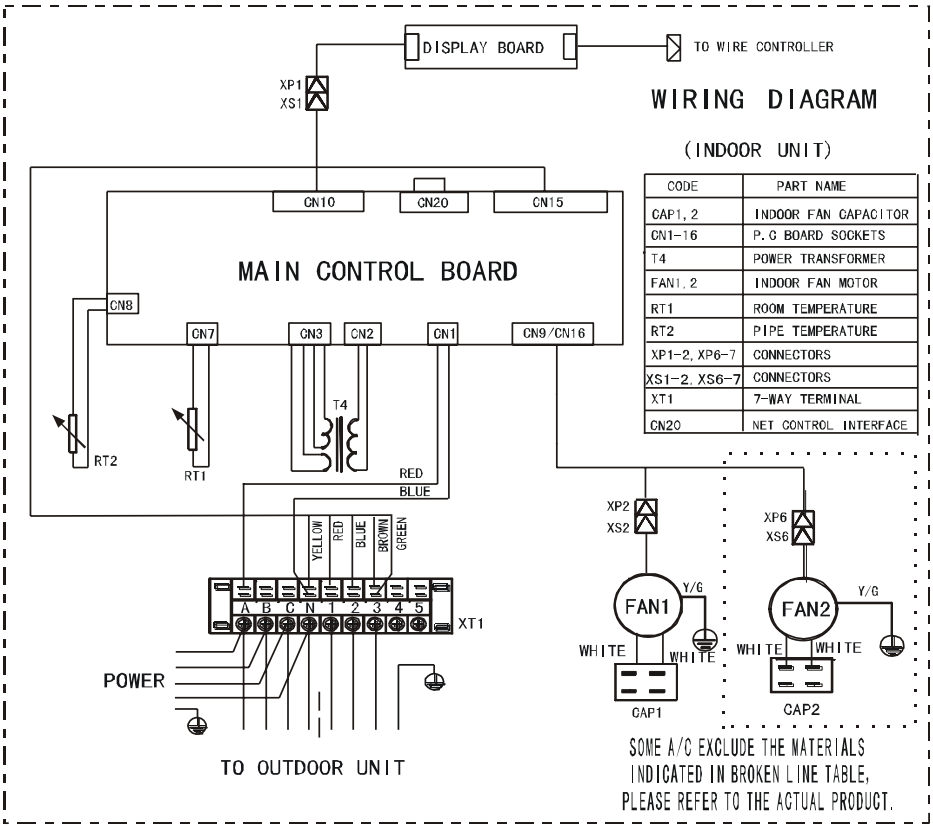
4. Piping Diagrams



Remark:

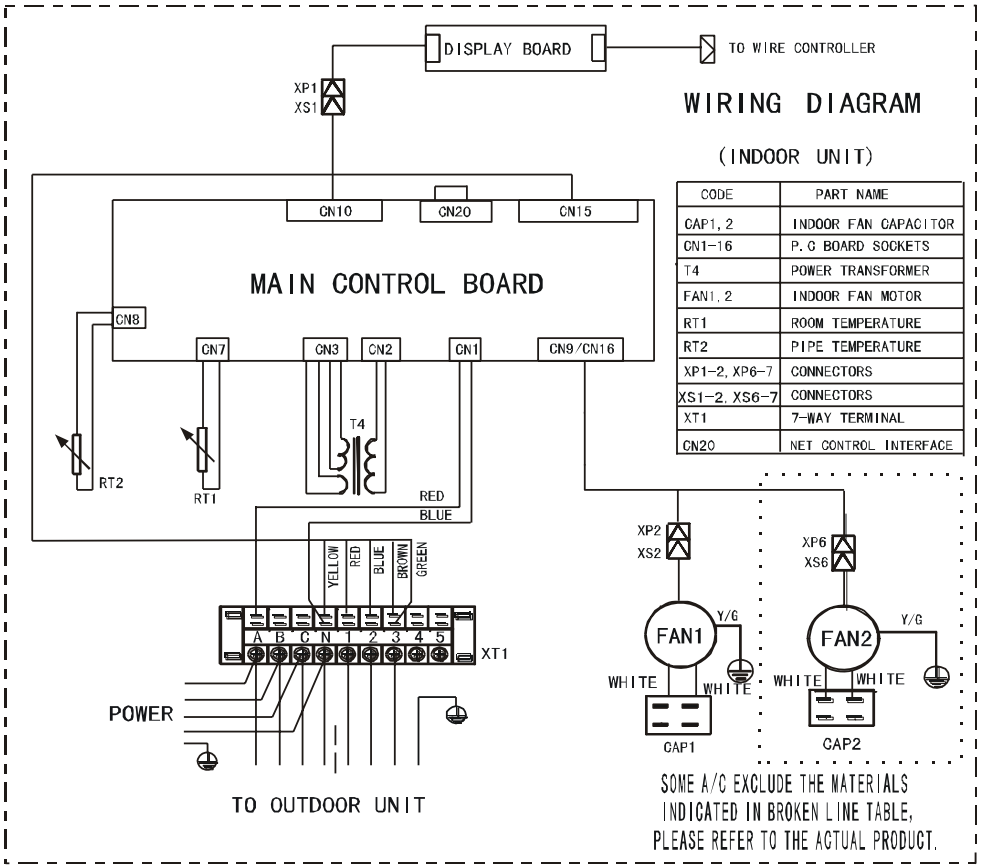
For DCT 100HSPo, DCT 140HSPo, check valve and auxiliary capillary is not included.

5.4. DCT 100HSPi



CODE	PART NAME
CAP1, 2	INDOOR FAN CAPACITOR
CN1-16	P.C BOARD SOCKETS
T4	POWER TRANSFORMER
FAN1, 2	INDOOR FAN MOTOR
RT1	ROOM TEMPERATURE
RT2	PIPE TEMPERATURE
XP1-2, XP6-7	CONNECTORS
XS1-2, XS6-7	CONNECTORS
XT1	7-WAY TERMINAL
CN20	NET CONTROL INTERFACE

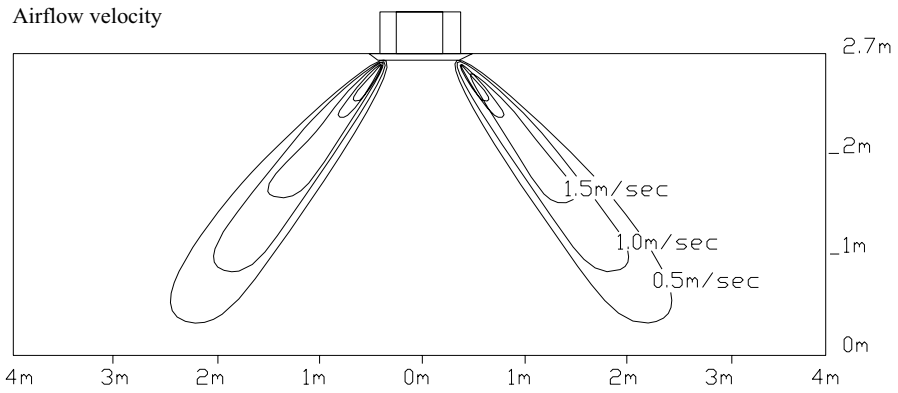
2.3. DCT 140HSPi, DCT 170HSPi



CODE	PART NAME
CAP1, 2	INDOOR FAN CAPACITOR
CN1-16	P.C BOARD SOCKETS
T4	POWER TRANSFORMER
FAN1, 2	INDOOR FAN MOTOR
RT1	ROOM TEMPERATURE
RT2	PIPE TEMPERATURE
XP1-2, XP6-7	CONNECTORS
XS1-2, XS6-7	CONNECTORS
XT1	7-WAY TERMINAL
CN20	NET CONTROL INTERFACE

6. Air Velocity and Temperature Distributions

Discharge angle 60°



7. Electric Characteristics

Units					Power supply		IFM	
Model	Hz	Voltage	Min. Voltage	Max. Voltage	MCA	MFA	KW	FLA
DCT 100HSPi	50	380	342	418	0.9125	15	80	073
DCT 140HSPi	50	380	342	418	2.8125	15	350	2,25
DCT 170HSPi	50	380	342	418	2.8125	15	350	2,25

Symbols:

MCA: Min. Circuit Amps(A)

MFA: Max. Fuse Amps(See note 5)

KW: Fan Motor Rated Output(KW)

FLA: Full Load Amps

IFM: Indoor Fan Motor

Note:

1. Voltage range

Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits;

2. Maximum allowable voltage unbalance between phases is 2%;

3. MCA/MFA

MCA=1.25*FLA

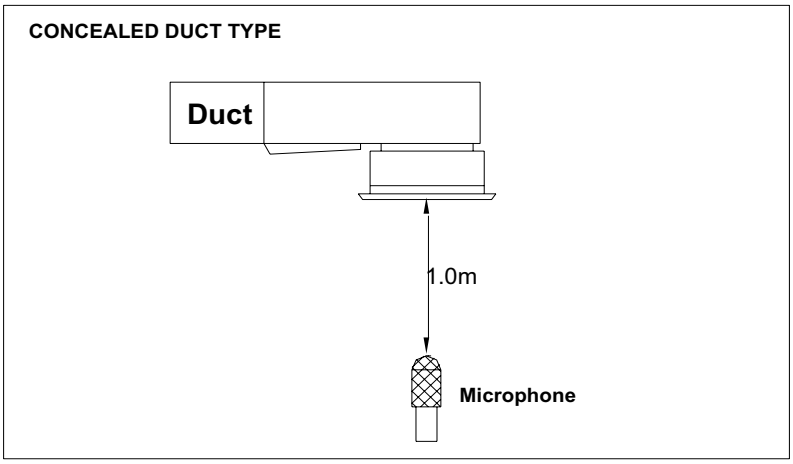
MFA<=4*FLA

(Next lower standard fuse rating Min. 15A);

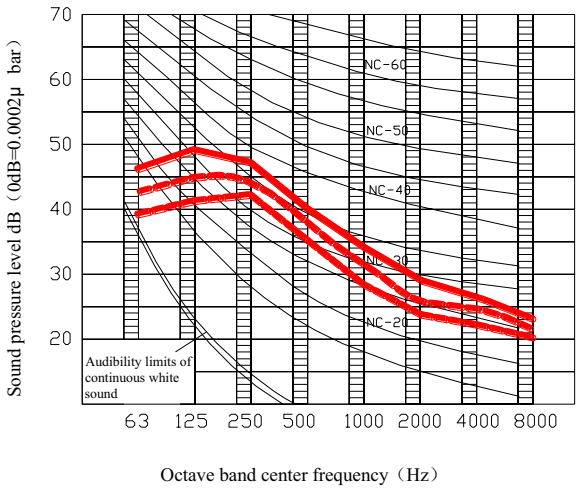
3. Select wire size based on the MCA;

5. Instead of fuse, use circuit breaker.

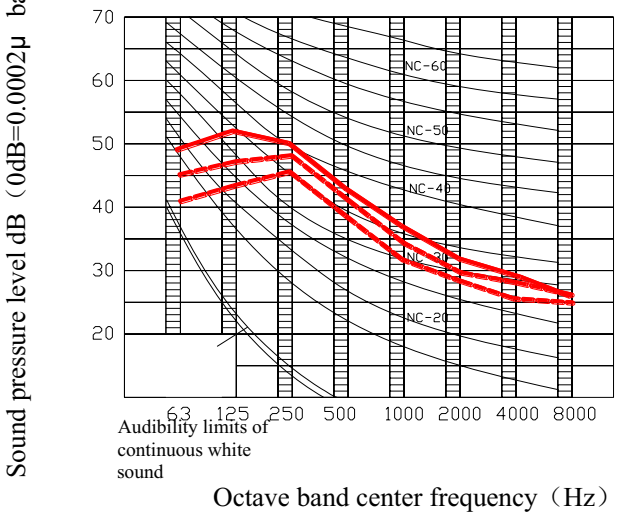
8. Sound Levels



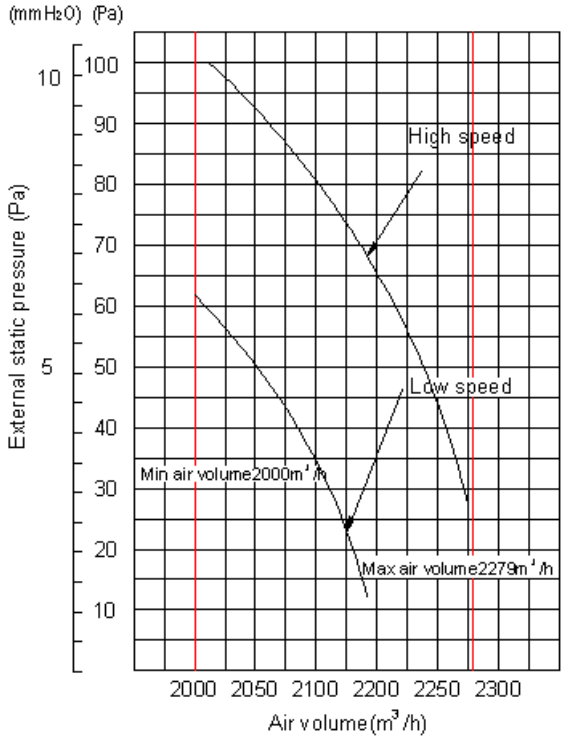
DCT 100HSPi



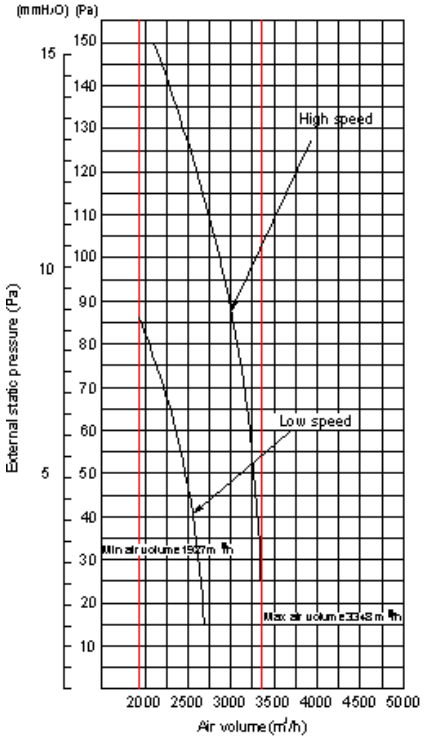
DCT 140HSPi, DCT 170HSPi



10.Static pressure



DCT 100HSPi



DCT 140HSPi, DCT 170HSPi

11. Accessories

11.1 Wild variety of optional accessories

---Including front clapboard, panel, canvas air passage, filter, etc.

Canvas air passage

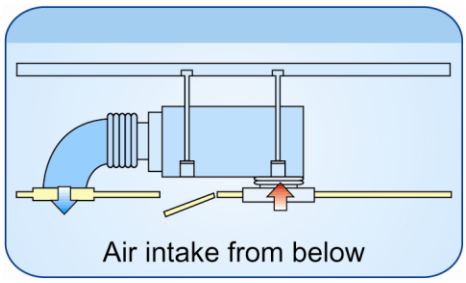
Clapboard

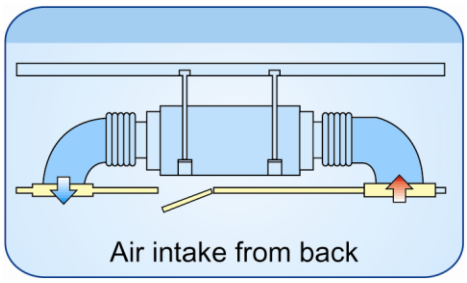
Panel

11.2 A long-life and high-efficiency filter

11.3 Way of air intake and inserting air filter

---Air intake can be positioned either at the back or below the unit. Similarly, the air filter also can be inserted either from the back or from the bottom of the unit.

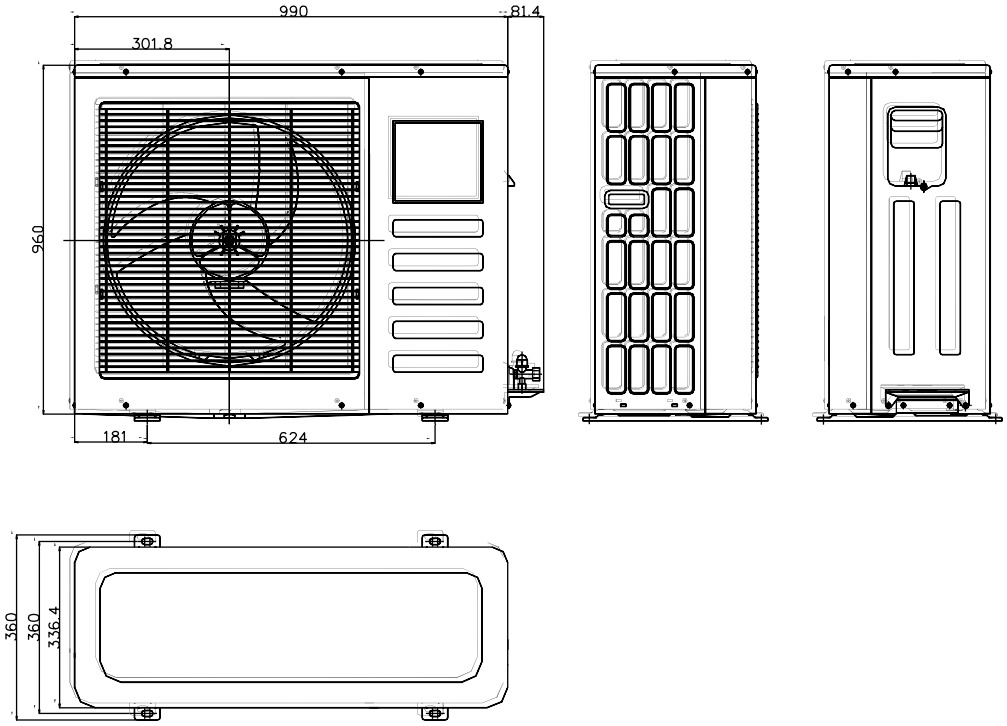




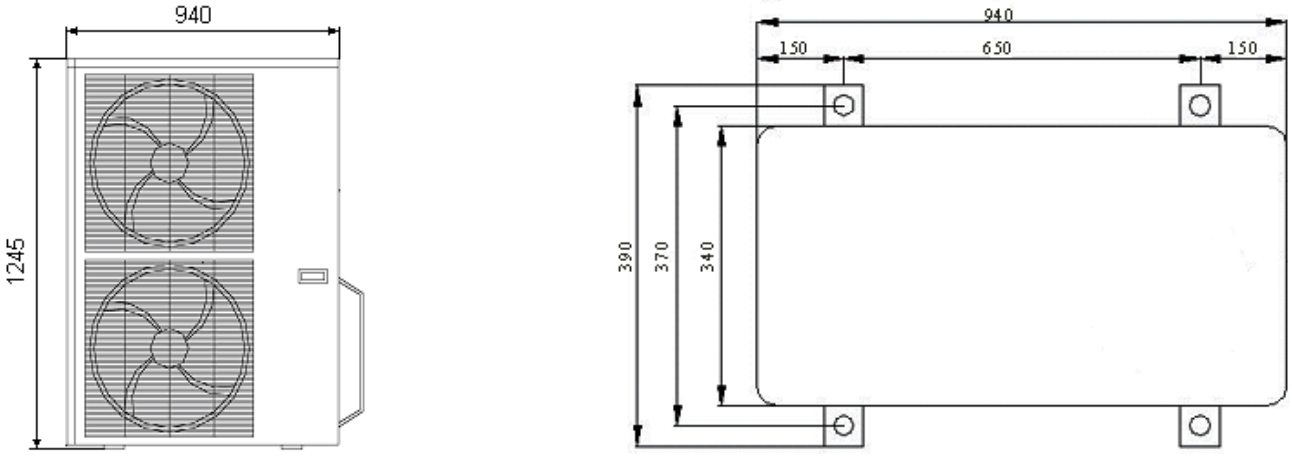
Outdoor Units

1. Dimensions……41
2. Service Space……43
3. Wiring Diagrams……...44
4. Field Wiring……47
5. Electric Characteristics……..48
6. Operation Limits……..49
7. Sound Levels……50
8. Exploded view……...52
9. Troubleshooting……...60

1.3. DCT 100HSPo

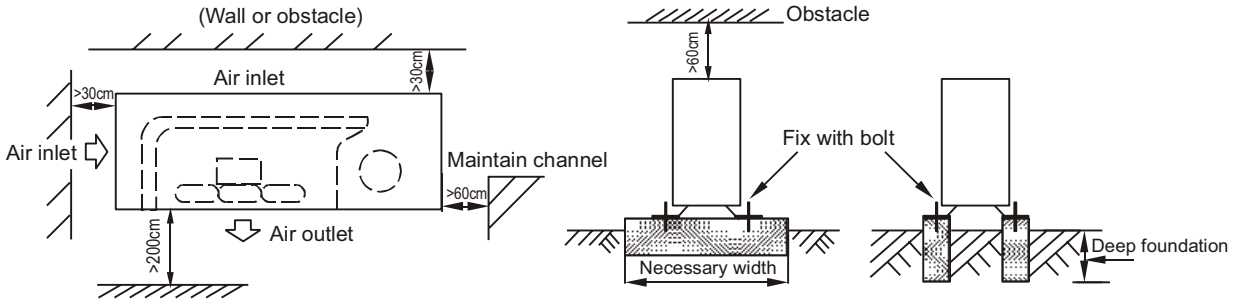


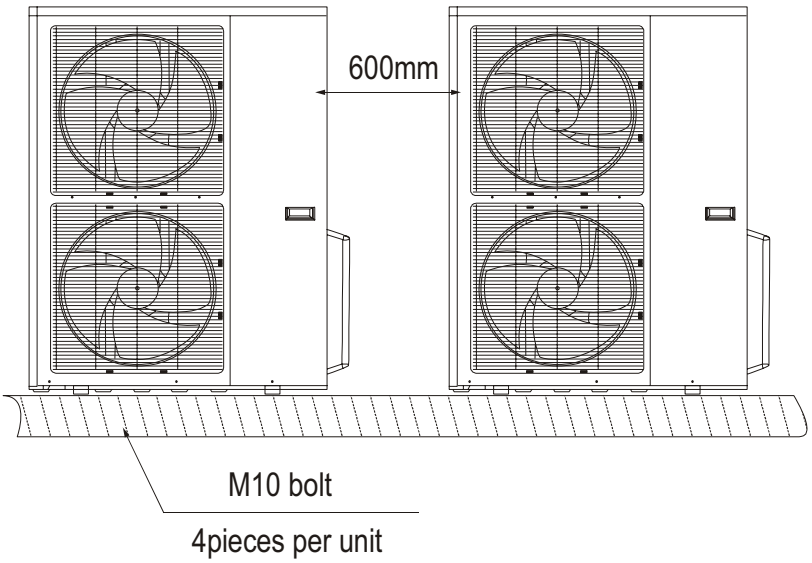
1.4. DCT 140HSPo, DCT 170HSPo



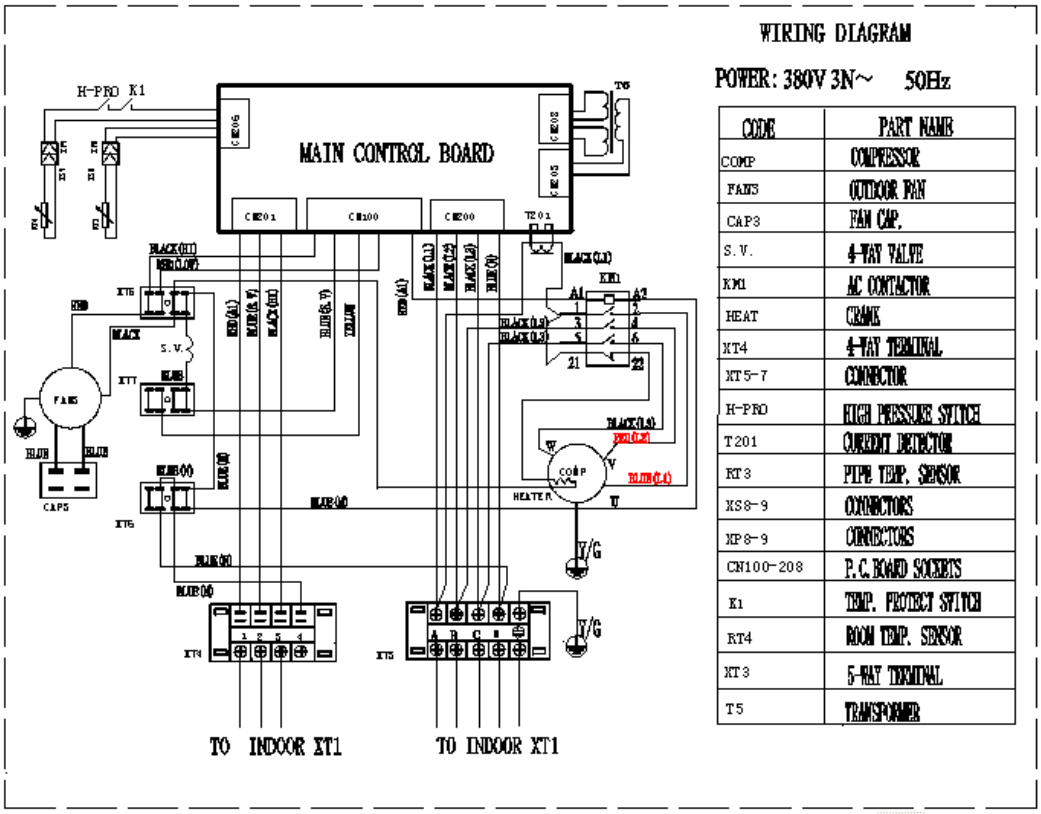
2. Service Space

Capacity≤ DCT 170HSPo



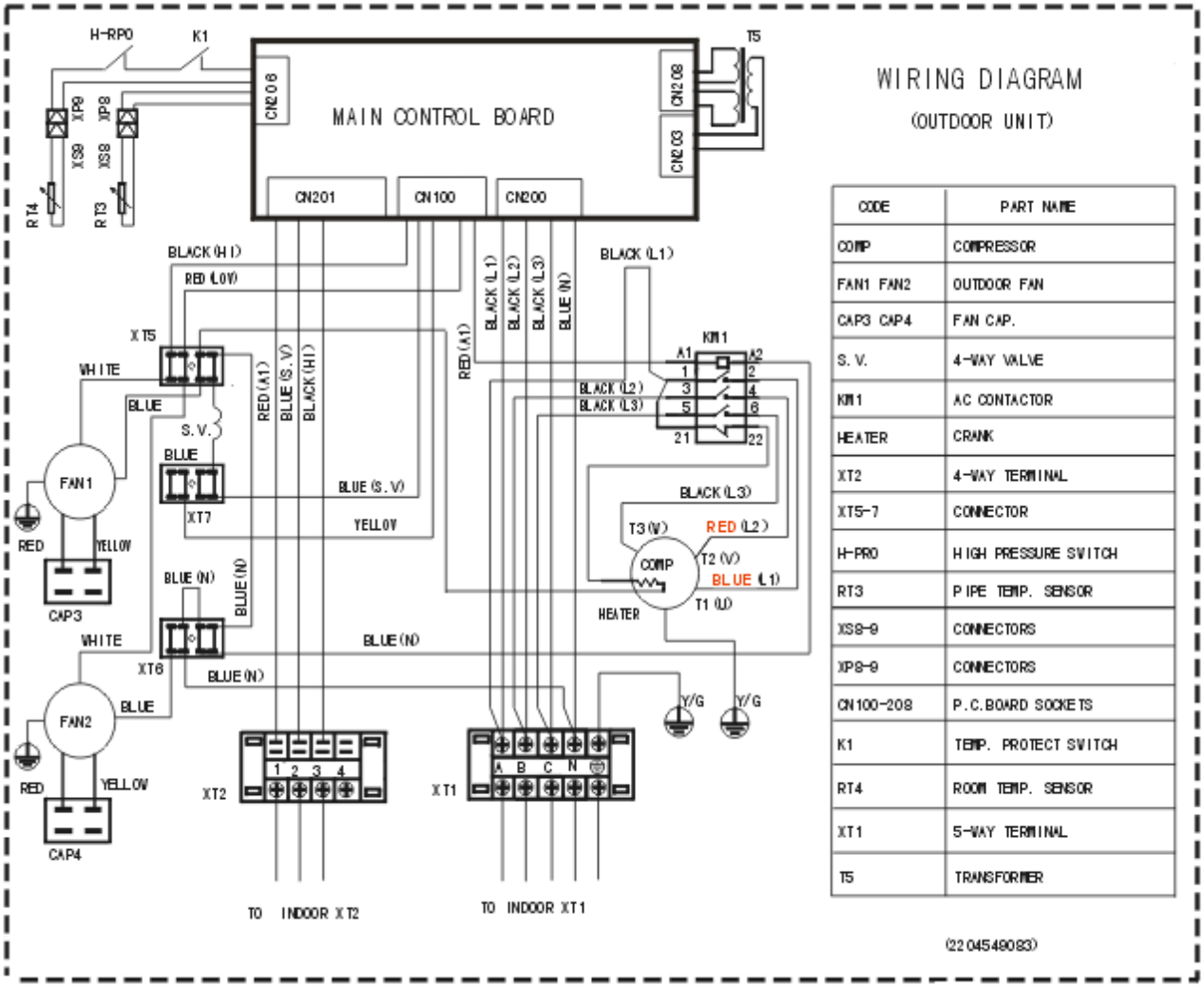


3.4. DCT 100HSPi



CODE	PART NAME
COMP	COMPRESSOR
FAN3	OUTDOOR FAN
CAP3	FAN CAP.
S.V.	4-WAY VALVE
KM1	AC CONTACTOR
HEAT	CRANK
XT4	4-WAY TERMINAL
XT5-7	CONNECTOR
H-PRO	HIGH PRESSURE SWITCH
T201	CURRENT DETECTOR
RT3	PIPE TEMP. SENSOR
XS8-9	CONNECTORS
XP8-9	CONNECTORS
CN100-208	P.C.BOARD SOCKETS
K1	TEMP. PROTECT SWITCH
RT4	ROOM TEMP. SENSOR
XT3	5-WAY TERMINAL
T5	TRANSFORMER

3. 5. DCT 140HSPi, DCT 170HSPi



CODE	PART NAME
COMP	COMPRESSOR
FAN1 FAN2	OUTDOOR FAN
CAP3 CAP4	FAN CAP.
S.V.	4-WAY VALVE
KM1	AC CONTACTOR
HEATER	CRANK
XT2	4-WAY TERMINAL
XT5-7	CONNECTOR
H-PRO	HIGH PRESSURE SWITCH
RT3	PIPE TEMP. SENSOR
XS8-9	CONNECTORS
XP8-9	CONNECTORS
CN100-208	P.C.BOARD SOCKETS
K1	TEMP. PROTECT SWITCH
RT4	ROOM TEMP. SENSOR
XT1	5-WAY TERMINAL
T5	TRANSFORMER

5. Electric Characteristics

Model	Units				Compressor		OFM	
	Hz	Voltage	Min.	Max.	MSC	RLA	KW	FLA
DCT 100HSPo	50	380	342	418	61	6.58	250	1.38
DCT 140HSPo	50	380	342	418	66	8.22	65	0.7
DCT 170HSPo	50	380	342	418	67	9.77	65	0.7

Symbols:

MSC: Max. Starting Current

RLA: Rated Locked Current

OFM: Outdoor Fan Motor

FLA: Full Load Amps.

KW: Rate Motor Output

Notes:

1. RLA is based on the following conditions:

Indoor temp. 27℃ DB/19℃ WB

Outdoor temp. 35℃ DB

2. MSC means the Max. current during the starting of compressor;

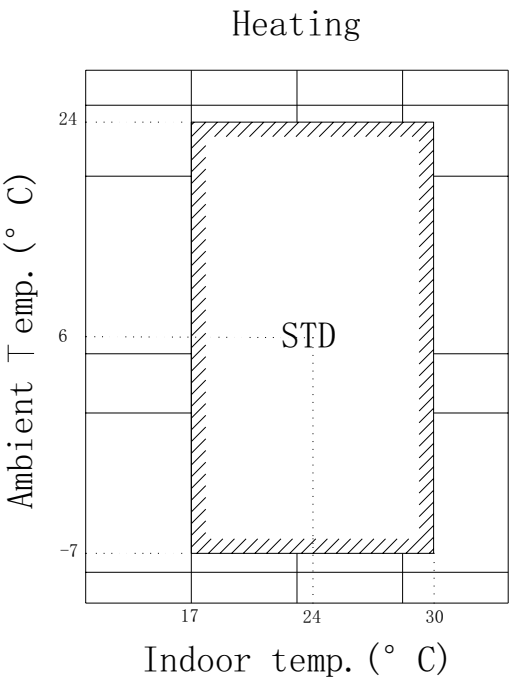
3. Voltage range

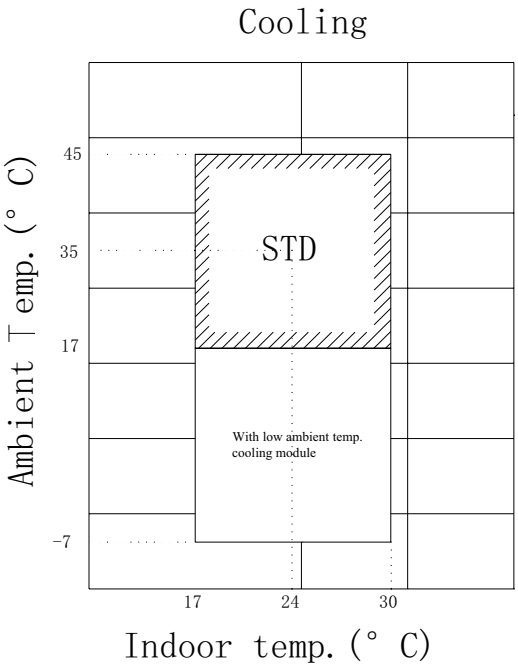
Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits;

4. Maximum allowable voltage variation between phase is 2%;

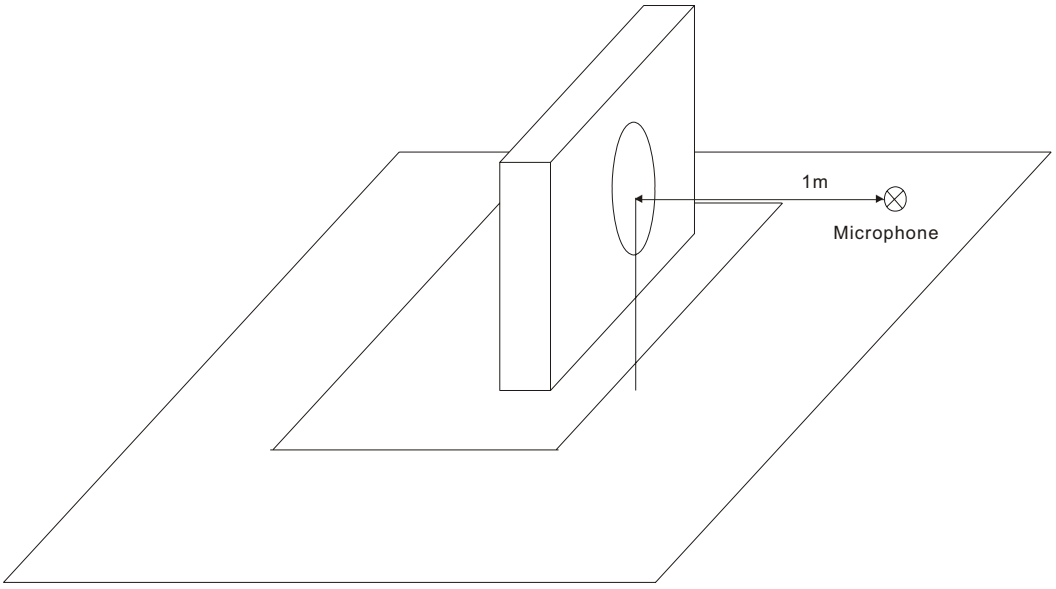
6. Operation Limits

Ensure the operating temperature is in allowable range.





7. Sound levels



Model	Noise Level(dB(A))
18000Btu/h	48
24000Btu/h	55
30000Btu/h	57
36000Btu/h	
48000Btu/h	58
60000Btu/h	

9. Troubleshooting

9.1 Indoor unit's LED indication of trouble

NO.	Protection or Malfunction	Operation lamp	Timer lamp	Defrosting lamp	Auto recover
1	Indoor temp. sensor abnormal	×	☆	×	Yes
2	Indoor heat exchanger sensor abnormal	☆	×	×	Yes
3	Outdoor heat exchanger sensor abnormal	×	×	☆	Yes
4	Outdoor abnormal	☆	☆	☆	Yes
5	EEPROM abnormal	☆	☆	×	No

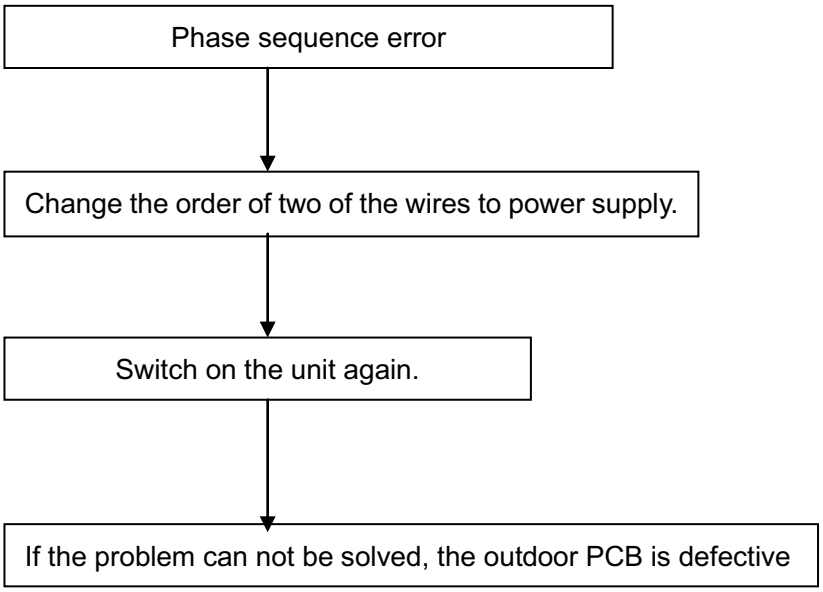
×——Extinguish ; ☆——Flash at 5Hz

9.2 LEDs' for the indication of outdoor trouble

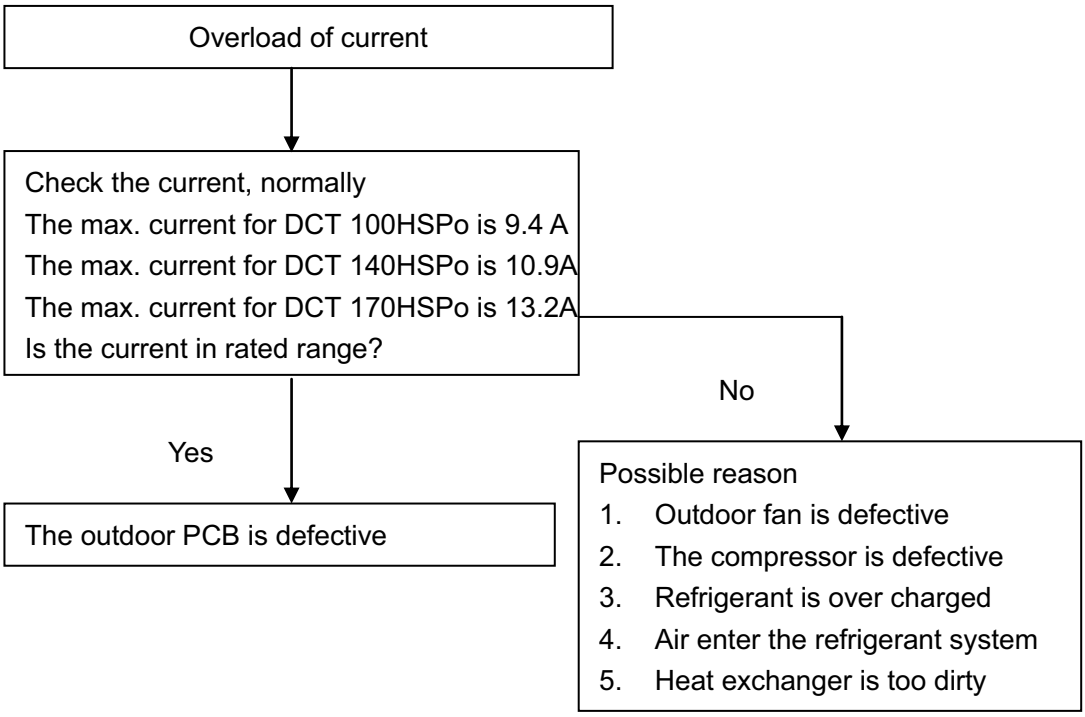
DCT 100HSPo, DCT 140HSPo, DCT 170HSPo

Type	Contents	LED1	LED2	LED3
Protection	Phase sequence	Flash	Off	Off
Protection	Overload of current	Off	Off	Flash
Protection	Lack of phase	Flash	Off	Off
Protection	Protection of pressure	Flash	Flash	Off
Protection	Open-circuit and short-circuit trouble of T3	Off	Flash	Flash
Protection	Open-circuit and short-circuit trouble of T4	Off	Flash	Off
Protection	High temperature protection of condenser	Flash	Flash	Flash

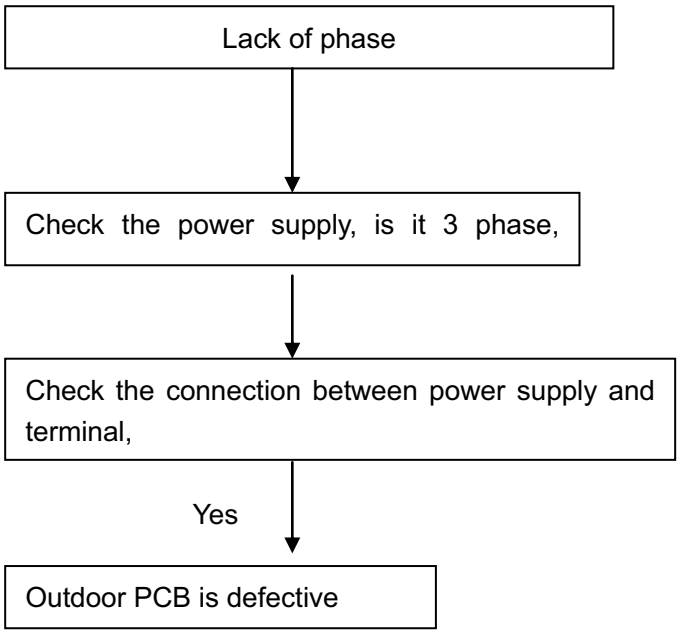
9.2.1 Phase sequence error:


Phase sequence error
Change the order of two of the wires to power supply.
Switch on the unit again.
If the problem can not be solved, the outdoor PCB is defective

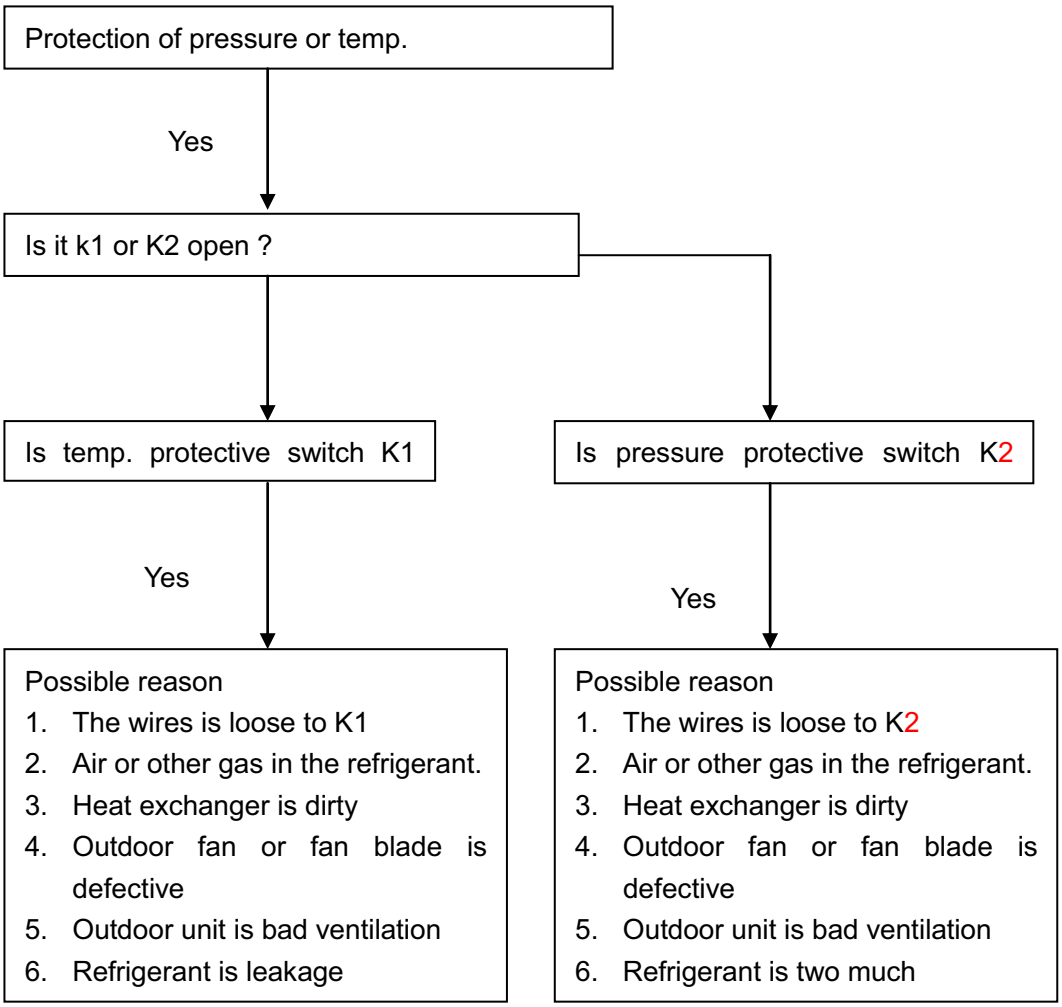
9.2.2 Overload of current


Overload of current
Check the current, normally
The max. current for DCT 100HSPo is 9.4 A
The max. current for DCT 140HSPo is 10.9A
The max. current for DCT 170HSPo is 13.2A
Is the current in rated range?
No
Yes
The outdoor PCB is defective
Possible reason
1. Outdoor fan is defective
2. The compressor is defective
3. Refrigerant is over charged
4. Air enter the refrigerant system
5. Heat exchanger is too dirty

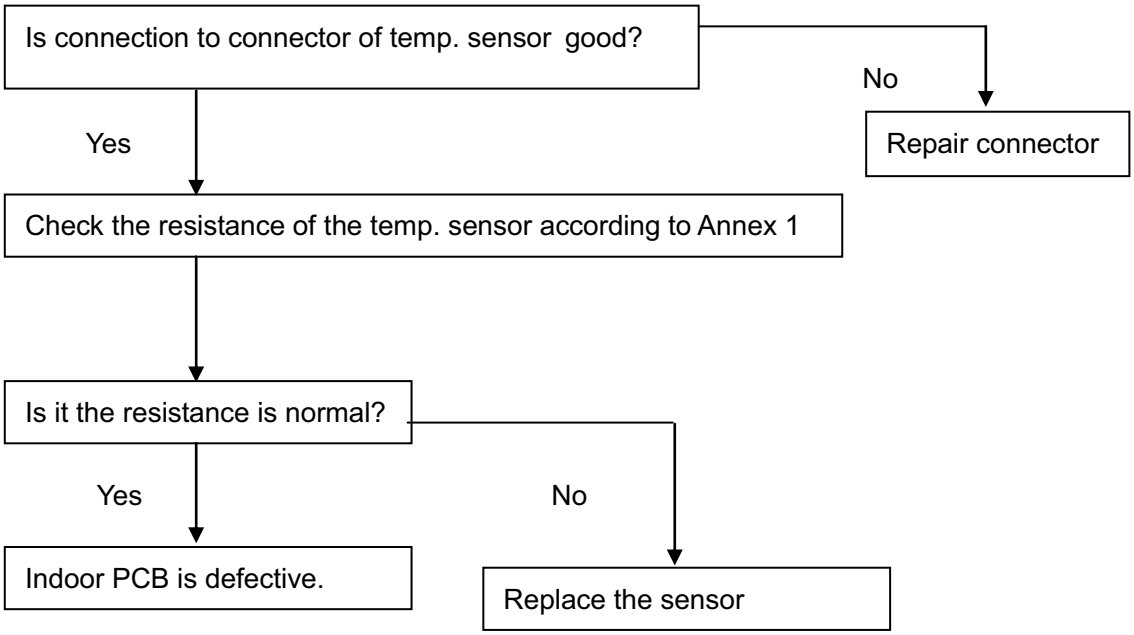
9.2.3 Lack of phase


Lack of phase
Check the power supply, is it 3 phase,
Check the connection between power supply and terminal,
Yes
Outdoor PCB is defective

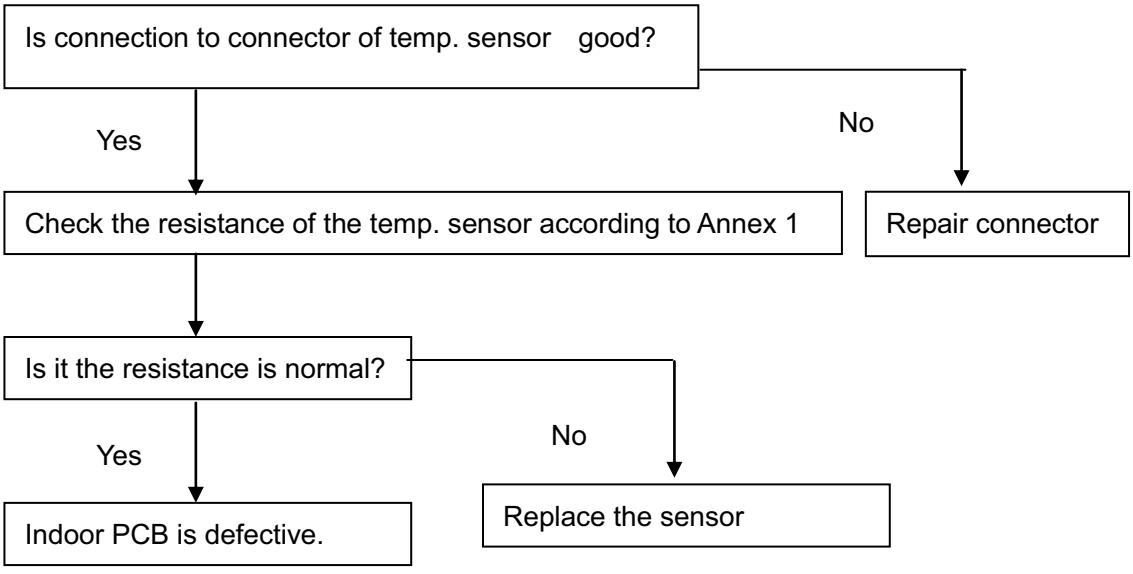
9.2.4 Protection of pressure or temp.


Protection of pressure or temp.
Yes
Is it k1 or K2 open ?
Is temp. protective switch K1
Is pressure protective switch K2
Yes
Yes
Possible reason
1. The wires is loose to K1
2. Air or other gas in the refrigerant.
3. Heat exchanger is dirty
4. Outdoor fan or fan blade is defective
5. Outdoor unit is bad ventilation
6. Refrigerant is leakage
Possible reason
1. The wires is loose to K2
2. Air or other gas in the refrigerant.
3. Heat exchanger is dirty
4. Outdoor fan or fan blade is defective
5. Outdoor unit is bad ventilation
6. Refrigerant is two much

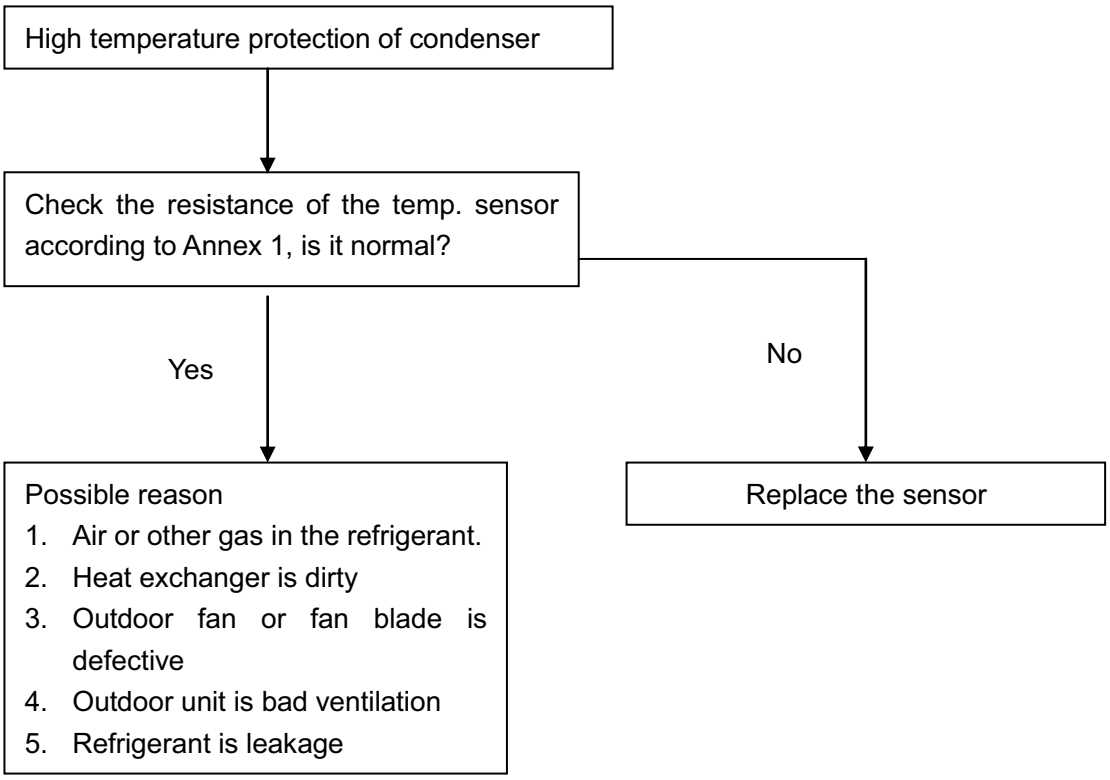
9.2.5 Open-circuit and short-circuit trouble of T3



9.2.6 Open-circuit and short-circuit trouble of T4



9.2.7 High temperature protection of condenser


High temperature protection of condenser
Check the resistance of the temp. sensor according to Annex 1, is it normal?
Yes
No
Possible reason
1. Air or other gas in the refrigerant.
2. Heat exchanger is dirty
3. Outdoor fan or fan blade is defective
4. Outdoor unit is bad ventilation
5. Refrigerant is leakage
Replace the sensor

9.3 Troubles and Solutions

If any the following abnormal conditions occur, turn off the power supply immediately. Please contact our dealer.		
TROUBLES	Indicator lamps flash rapidly, after your disconnecting and connecting the unit, the situation is the same.	
	Fuse or circuit breaker work frequently.	
	Foreign matter or water has fallen into the unit.	
	Remote controller is disabled or the switch is out of hand.	
	Any other unusual conditioner is observed.	
If any of the following conditions occur, check your unit and resolve corresponding problems referring to given remediation. If the trouble can't be settled contact our dealer.		
Trouble	Cause	Solutions
Unit does not start	Power failure.	Wait for the comeback of power
	Power switch is open.	Switch on the power
	Fuse of power switch may have blown.	Replace the fuse
	Batteries of remote controller are exhausted.	Replace the batteries
	The time is not start-up time you have set.	Wait or cancel the time set.
Air flowing normally with low cooling(heating) effect	Temperature is not set correctly.	Set the temperature properly.
	Door or window is open.	Close door and window.
	Air filter is blocked with dust or dirtiness.	Clean the air filter.
	Inlet/outlet of indoor/outdoor units are blocked.	Clear all blockages.
	Inlet/outlet of indoor/outdoor units are blocked.	Clear the blockage, then restart your operation.
	Be in 3 minutes protection of compressor	Wait

◆ NOTE: Do not replace electric wire or repair the air conditioner by yourself to avoid possible danger.

9.4 Troubles and solutions concerning the remote controller

Please make the following check before asking for repair or maintenance.

Trouble	Cause	Solutions
CAN NOT CHANGE THE FAN SPEED SETTING	Check if the mode display on the LCD is AUTO	The Indoor Unit will select fan speed automatically when AUTO mode is selected.
	Check if the mode display on the LCD is DRY	The Indoor Unit will select fan speed automatically when the unit is on DRY mode.

The transmission symbol does not flash		
Symptom	Checking items	Cause
Press ON/OFF button, the remote controlling signals can not be transmitted	Check if the remote controller has run out of power	When the battery was out, transmission signals can not be sent

Temperature display disappear		
Symptom	Checking items	Cause
Temperature Display does not light.	Check if the mode display on the LCD is FAN ONLY	You can not set the temperature when the unit is on FAN ONLY mode.

The Display Goes Off		
Symptom	Checking items	Cause
The indication on the display disappears after a lapse of time.	Check whether the timer operation has come to an end when the OFF TIMER is indicated on the display.	The air conditioner operation stops since the set time elapsed.
The ON TIMER indicators go off after a lapse of certain time.	Check whether the timer operation is started when the ON TIMER is indicated on the display.	When the time set to start the air conditioner is reached, the air conditioner will automatically start and the appropriate indicator will go off.

The Signal Receiving Tone does Not Sound		
Symptom	Checking items	Cause
No receiving tone sounds from the indoor unit even when the ON/OFF button is pushed.	Check whether the signal transmitter of the remote controller is properly directed to the receiver of the indoor unit when the ON/OFF button is pushed.	Direct the signal transmitter of the remote controller to the receiver of the indoor unit, and then repeatly push the ON/OFF button twice.
Buttons on the remote controller don't work.		Press Reset button.

Part 4
Installation

Installation……

1. Refrigerant pipe installation

1.1. Measure the necessary length of the connecting pipe, and make it by the following way.

a. Connect the indoor unit at first, then the outdoor unit.

Bend the tubing in proper way. Do not harm them.

CAUTIONS:

- Daub the surfaces of the flare pipe and the joint nuts with frozen oil, and wrench it for 3~4 rounds
- With hands before fasten the flare nuts.

Be sure to use two wrenches simultaneously when you connect or disconnect the pipes.

Tubing size	Torque
6.35	1420~1720N.cm(144~176kgf.cm)
9.52	3270~3990N.cm(333~407kgf.cm)
12.7	4950~6030N.cm(504~616kgf.cm)
16	6180~7540N.cm(630~770kgf.cm)
19	9720~11860N.cm(990~12106kgf.cm)

b. The stop value of the outdoor unit should be closed absolutely (as original state). Every time you connect it, first loosen the nuts at the part of stop value, then connect the flare pipe immediately (in 5 minutes). If the nuts have been loosened for a long time, dusts and other impurities may enter the pipe system and may cause malfunction later. So please expel the air out of the pipe with refrigerant before connection.

c. Expel the air after connecting the refrigerant pipe with the indoor unit and the outdoor unit. Then fasten the nuts at the repair-points.

1.2. Locate The Pipe

a. Drill a hole in the wall (suitable just for the size of the wall conduit), then set on the fittings such as the wall conduit and its cover.

b. Bind the connecting pipe and the cables together tightly with binding tapes. Do not let air in, which will cause water leakage by condensation.

c. Pass the bound connecting pipe through the wall conduit from outside. Be careful of the pipe allocation to do no damage to the tubing.

1.3. Connect the pipes.

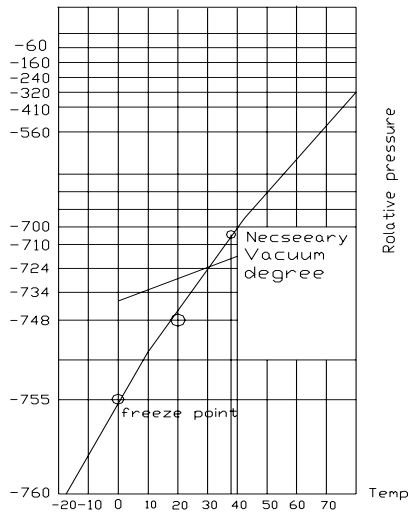
1.4. Then, open the stem of stop values of the outdoor unit to make the refrigerant pipe connecting the indoor unit with the outdoor unit in fluent flow.

1.5. Be sure of no leakage by checking it with leak detector or soap water.

1.6. Cover the joint of the connecting pipe to the indoor unit with the soundproof / insulating sheath (fittings), and bind it well with the tapes to prevent leakage.

2. Vacuum dry and leakage checking

2.1. Vacuum Dry: use vacuum pump to change the moisture (liquid) into steam (gas) in the pipe and discharge it out of the pipe to make the pipe dry. Under one atmospheric pressure, the boiling point of water(steam temperature) is 100℃. Use vacuum pump to make the pressure in the pipe near vacuum state, the boiling point of water falls relatively. When it falls under outdoor temperature, the moisture in the pipe will be vaporized.

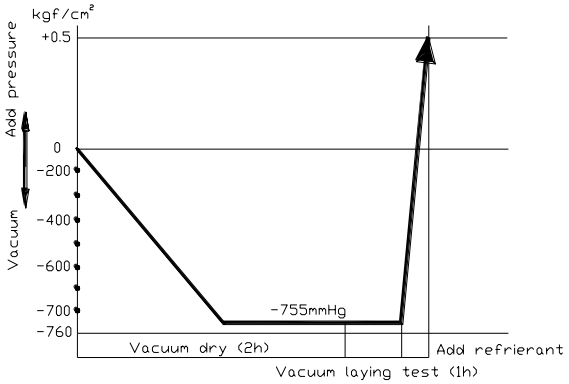


2.2. Vacuum dry procedure

There are two methods of vacuum dry due to different construction environment: common vacuum dry, special vacuum dry.

①. Common vacuum dry procedure

- Vacuum dry (for the first time)---connect the all-purpose detector to the inlet of liquid pipe and gas pipe, and run the vacuum pump more than two hours (the vacuum pump should be below -755mmHg)
- If the pump can't achieve below -755mmHg after pumping 2 hours, moisture or leakage point will still exist in the pipe. At this time, it should be pumped 1 hour more.
- If the pump can't achieve -755mmHg after pumping 3 hours, please check if there are some leakage points.
- Vacuum placement test: place 1 hour when it achieves -755mmHg, pass if the vacuum watch shows no rising. If it rises, it shows there's moisture or leakage point.
- Vacuuming from liquid pipe and gas pipe at the same time.
- Sketch map of common vacuum dry procedure.



② Special vacuum dry procedure

- This vacuum dry method is used in the following conditions:
- ◆ There's moisture when flushing the refrigerant pipe.
- ◆ Rainwater may enter into the pipe.
- Vacuum dry for the first time …… 2h pumping

③. Vacuum destroy for the second time …… Fill nitrogen to 0.5Kgf/cm2

Because nitrogen is for drying gas, it has vacuum drying effect during vacuum destroy. But if the

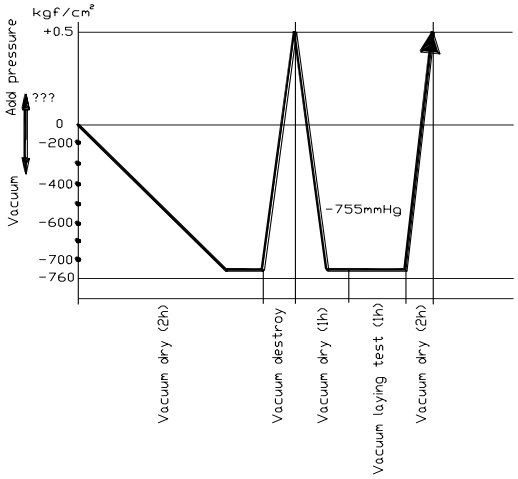
moisture is too much, this method can't dry thoroughly. So, please pay more attention to prevent water entering and forming condensation water.

④. Vacuum dry for the second time……1h pumping

Determinant: Pass if achieving below -755mmHg. If -755mmHg can't be achieved in 2h, repeat procedure ③ and ④.

⑤. Vacuum placing test …… 1h

⑥. Sketch map of special vacuum dry procedure



3. Additional charge

3.1. When the length of the one-way pipe is less than 5m, additional refrigerant charge after vacuuming is unnecessary.

3.2. When the length of one-way pipe is over 5m, the additional charge quantity is as follows (unit in gram):

Calculation method

Refrigerant	Liquid diameter（mm）	Unit amount (g/m)	Formula
R410A	Φ6.35	30	(L-5)×22
	Φ9.53	65	(L-5)×60
	Φ12.7	90	(L-5)×110

Remark：1、The additional refrigerant charge is simply related with the liquid pipe diameter.

2、In the up formula, "L" means total length of liquid pipe(unit: m).

4. Water drainage

4.1. Gradient and Supporting

4.1.1 Keep the drainpipe sloping downwards at a gradient of at least 1/100. Keep the drainpipe as short as possible and eliminate the air bubble.

4.1.2 The horizontal drainpipe should be short. When the pipe is too long, a prop stand must be installed to keep the gradient of 1/100 and prevent bending. Refer to the following table for the specification of the prop stand.

	Diameter	Distance between the prop stands
Hard PVC pipe	25~40mm	1.5~2m

4.1.3. Precautions

① The diameter of drainpipe should meet the drainage requirement at least.

② The drainpipe should be heat-insulated to prevent atomization.

③ Drainpipe should be installed before installing indoor unit. After powering on, there is some water in water-receiver plate. Please check if the drain pump can operate correctly.

④ All connection should be firm.

⑤ Wipe color on PVC pipe to note connection.

⑥ Climbing, horizontal and bending conditions are prohibited.

⑦The dimension of drainpipe can't less than the connecting dimension of indoor drainpipe.

⑧ Heat-insulation should be done well to prevent condensation.

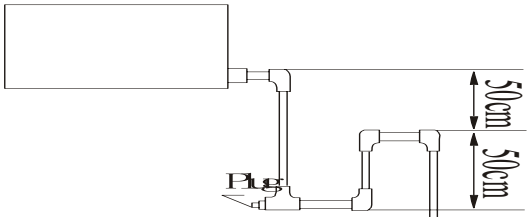
⑨Indoor units with different drainage type can't share one convergent drainpipe.

4.2 Drainpipe Trap

4.2.1. If the pressure at the connection of the drainpipe is negative, it needs to design drainpipe trap.

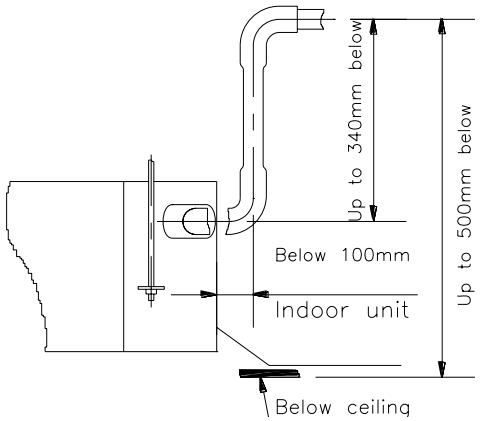
4.2.2. Every indoor unit needs one drainpipe trap.

4.2.3. A plug should be designed to do cleaning.



4.3 Upwards drainage(drain pump)

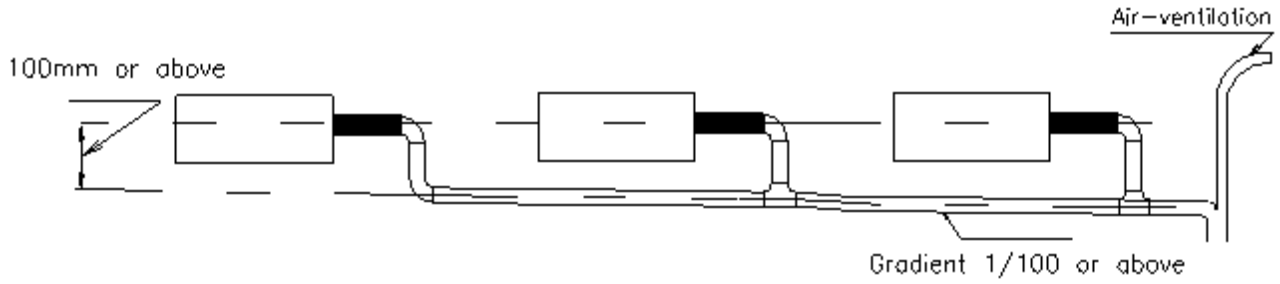
4.3.1. To ensure the gradient 1/100, the drainpipe can be lifted to 340mm. After upwards, place downwards, or it will cause malfunction to drain pump.



4.4 Convergent drainage

4.4.1. The number of indoor units should be as small as possible to prevent the traverse main pipe overlong.

4.4.2. Indoor unit with drain pump and indoor unit without drain pump should be in different drainage system.



4.4.3. Selecting the diameter

Number of connecting indoor units→Calculate drainage volume→Select the diameter

Calculate allowed volume =Total cooling capacity of indoor units(HP)×2 (l/ hr)

	Allowed volume(lean 1/100) (l/ hr)	I.D. (mm)	Thick
Hard	∽≤14	¢25	3.0
Hard	14＜∽≤88	¢30	3.5
Hard	88＜∽≤334	¢40	4.0
Hard	175＜∽≤334	¢50	4.5
Hard	334＜∽	¢80	6.0

4.5 Drainage test

Drainage without drain pump

After finishing drainpipe installation, pour some water into the water receiver plate to check if the water flows smoothly.

5. Insulation work

5.1 Insulation material and thickness

5.1.1. Insulation material

Insulation material should adopt the material which is able to endure the pipe's temperature: no less than 70℃ in the high-pressure side, no less than 120℃ in the low-pressure side(For the cooling type machine, no requirements at the low-pressure side.)

◆ Example: Heat pump type----Heat-resistant Polyethylene foam (withstand above 120℃)

Cooling only type---- Polyethylene foam (withstand above 100℃)

5.1.2. Thickness choice for insulation material

Insulation material thickness is as follows:

	Pipe diameter (mm)	Adiabatic material thickness
Refrigerant pipe	Φ6.4—Φ25.4	10mm
	Φ28.6—Φ38.1	15mm
Drainage pipe	Inner diameterΦ20—Φ32	6mm

5.2 Refrigerant pipe insulation

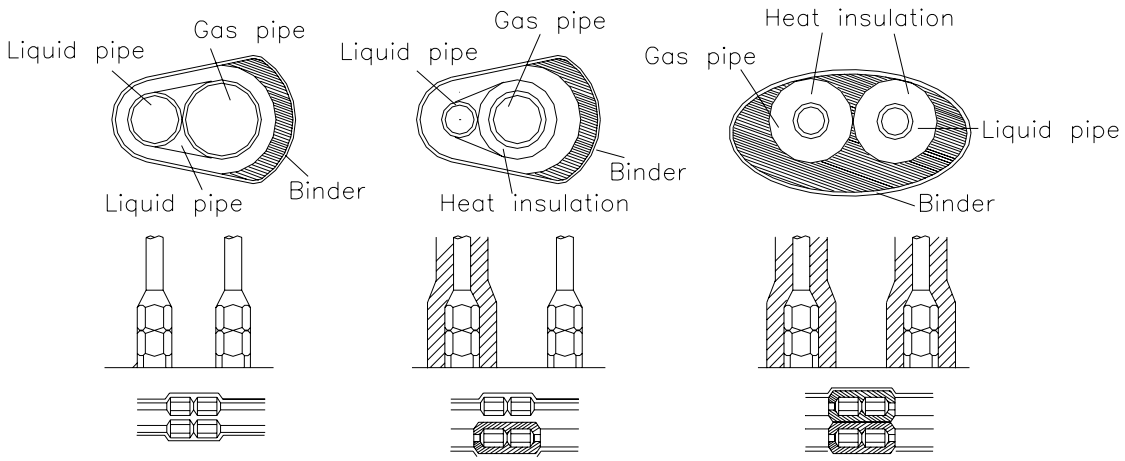
5.2.1. Work Procedure

① Before laying the pipes, the non-jointing parts and non-connection parts should be heat insulated.

② When the gas proof test is eligible, the jointing area, expanding area and the flange area should be heat insulated

5.2.2. Insulation for non-jointing parts and non-connection parts

wrong	right	
Gas pipe and liquid pipe should	Insulate the gas pipe (cooling only)	Insulate the gas pipe and liquid pipe

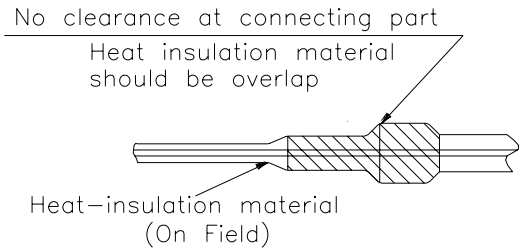


For construction convenience, before laying pipes, use insulation material to insulate the pipes to be deal with, at the same time, at two ends of the pipe, remain some length not to be insulated, in order to be welded and check the leakage after laying the pipes.

5.2.3. Insulate for the jointing area, expanding area and the flange area

① Insulate for the jointing area, expanding area and the flange area should be done after checking leakage of the pipes

② Make sure there's no clearance in the joining part of the accessorial insulation material and local preparative insulation material.



5.3 Drainage pipe insulation

The connection part should be insulated, or else water will be condensing at the non-insulation part.

5.4 Note

5.4.1 The jointing area, expanding area and the flange area should be heat insulated after passing the pressure test

5.4.2 The gas and liquid pipe should be heat insulated individually, the connecting part should be heat insulated individually.

5.4.3 Use the attached heat-insulation material to insulate the pipe connections (pipes' tie-in ,expand nut) of the indoor unit

Part 5
Control

Control……...

1. Remote controller

There’s one model R11HG/E.

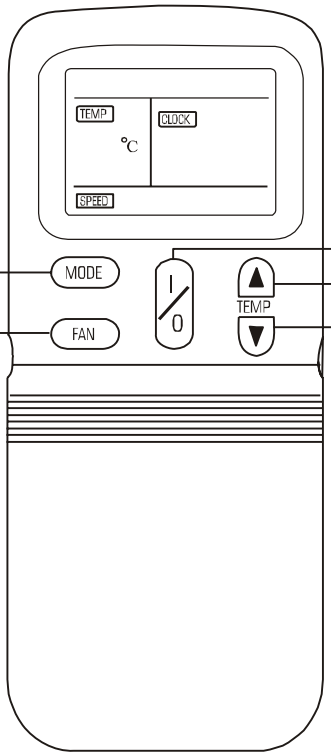
The below is R11HG/E remote controller.

Mode select button

Each time you push the button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, HEAT (cooling only type without), FAN ONLY and back to AUTO.

Fan button

This button is used for selecting fan speed. Each time you push the button, a fan speed is selected in a sequence that goes from AUTO, LOW, MED(Some models without, HIGH, and back to AUTO.



I/O Button

Push the button to start operation, push the button again to stop operation.

Temperature Button

▲ : The set temperature is increased to 30°C

▼ : The set temperature is decreased to 17°C

After Sliding the cover, the button and function are as follows:

Auto louver button

Push this button to swing louver. Push the button again to stop.

Confirmation button

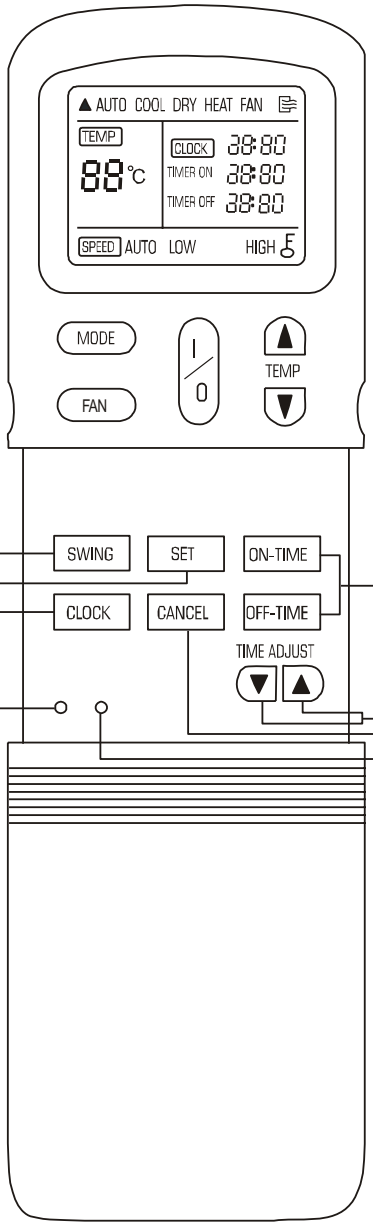
Push this button to confirm ON and OFF timer settings.

Clock button

Push this button to set time.

Lock button

When you push the LOCK button, all current settings are locked in and the remote controller does not accept any operation except that of the LOCK button. Use the lock mode when you want to prevent setting from being changed accidentally or play fully. Push the LOCK button again when you want to cancel the LOCK mode.



Timer button

Push ON-TIME timer button to set the ON timer. Push OFF-TIME timer button to set the OFF timer.

Time adjust button

This button is used for setting the current time and OFF time.

▲ Adjust forwards

▼ Adjust backwords

Cancel button

Push this button to cancel ON timer and OFF timer.

RESET button

When you push the RESET button, all current settings are cancelled and get into the condition of beginning. In the clock, the colon in "0:00" will flash, the mode displays "AUTO", fan speed displays "AUTO", the temperature displays "24".

Wind directory button

Push this button to change the swing angle of louver. (This is not conform to the unit without this function.)

Auto louver button

Push this button to swing louver. Push the button again to stop.

Reserve button

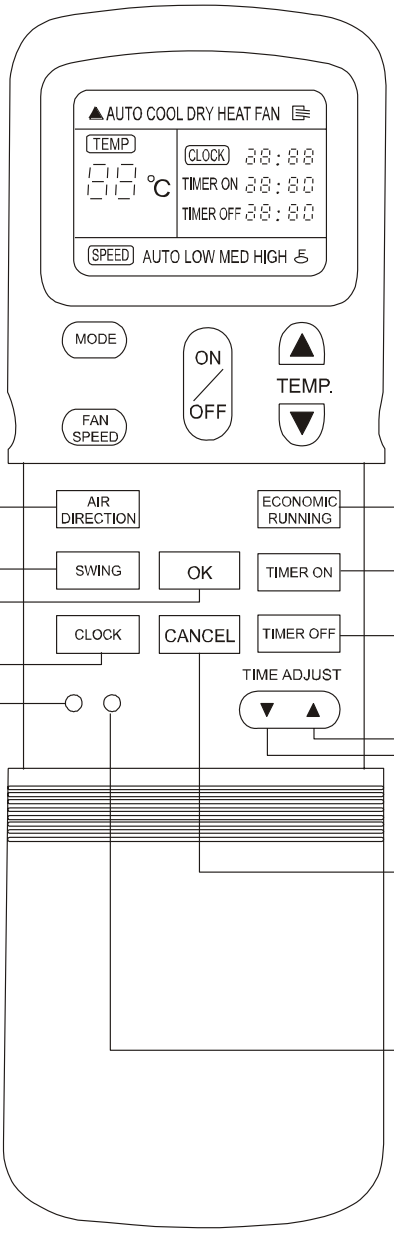
Push this button to reserve ON timer and OFF timer settings.

Clock button

Push this button to set time.

Lock button

When you push the LOCK button, all current settings are locked in and the remote controller does not accept any operation except that of the LOCK button. Use the lock mode when you want to prevent setting from being changed accidentally or playfully. Push the LOCK button again when you want to cancel the LOCK mode.



Economy running button

Push this button to set the economical operation mode (some models without).

ON/OFF timer button

Push TIMER ON timer button to set the ON timer.
Push TIMER OFF timer button to set the OFF timer.

Time adjust button

This button is used for setting the current time and OFF time.

Cancel button

Push this button to cancel ON timer and OFF timer.

Reset button

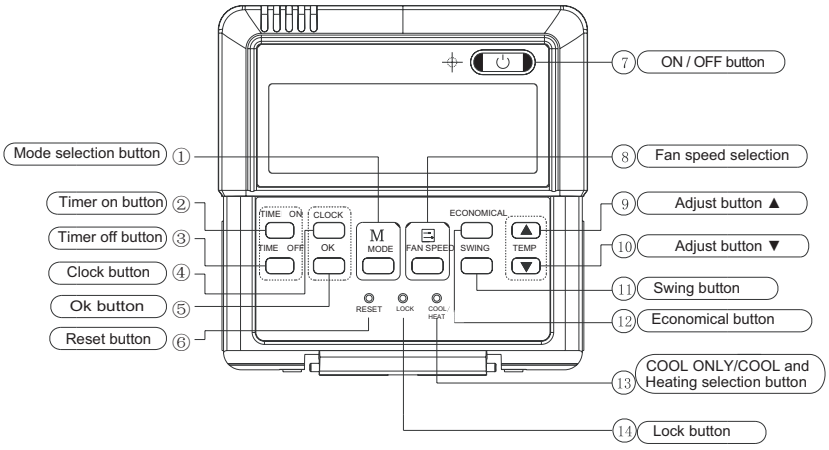
When you push the RESET button, all current settings are cancelled and get into the condition of beginning. In the clock, the colon in "0:00" will flash, the mode displays "AUTO", fan speed displays "AUTO" the temperature displays "24".

- The remote controller above drawing may have some differences from the one that you purchase.

3.2 Wired Remote Controller
3.2.1 KJR-10B

Name and functions of buttons on the wire controller

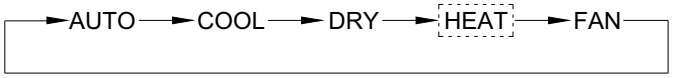
6. NAME AND FUNCTIONS OF BUTTONS ON WIRE CONTROLLER



1 mode selection button:

It is used to select mode, push the button one time, then the operation modes will change

In turn as follows:



Remark: no heating mode if wire controller is set as the cool only.

2 Timer on button:

Push the button to set TIMER ON, each time you push the button the time moves forward by o.5 hours. When the set time is over 10 hours, each time you push the button the time moves forward by 1 hour. If want to cancel the TIMER ON, then adjust the time of TIMER ON as 0.0

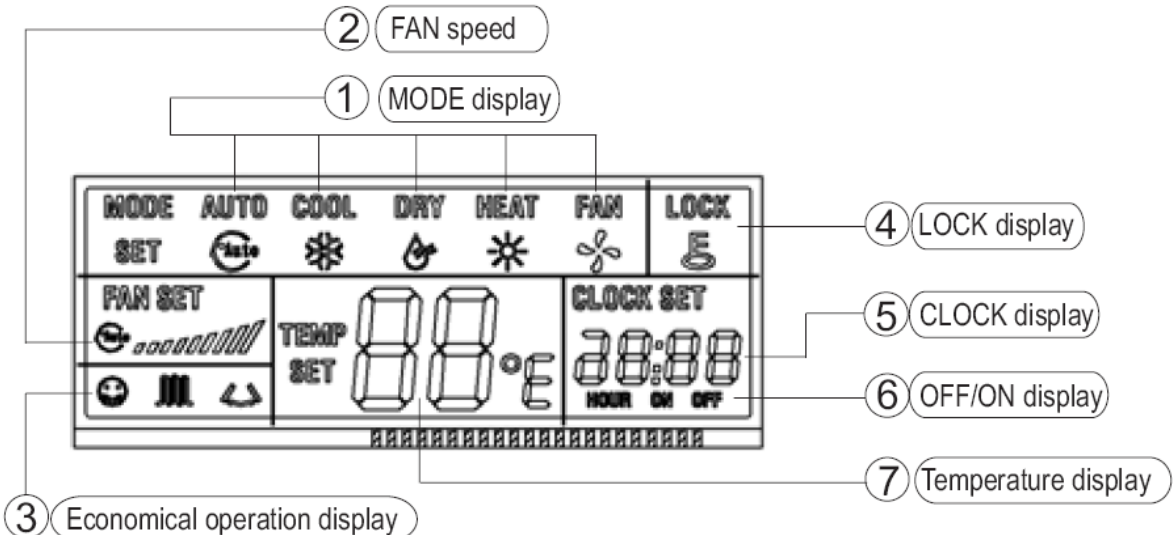
3 Timer off button:

Push the button to set TIMER OFF, each time you push the button the time moves forward by o.5 hours. When the set time is over 10 hours, each time you push the button the time moves forward by 1 hour. If want to cancel the TIMER OFF, then adjust the time of TIMER OFF as 0.0

4 CLOCK button:

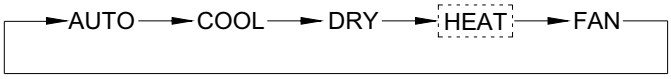
Normally display the clock set currently (display 12:00 for the first electrifying or resetting). When push the button for 4 seconds, the hour part on the clock display flashes every 0.5 seconds, then push button and to adjust hour; push the button CLOCK again, the minute part flashes every 0.5 seconds, then push and button to adjust minute. When set clock or alter clock setting, must push the confirm button to complete the setting

Name and function of LCD on the wire controller



1 Mode select button (MODE):

Press MODE button to select “COOL”, “DRY” , "HEAT", or "FAN ONLY" mode.(HEAT is invalid for COOL ONLY wire controller.)



2 Fan speed button (FAN SPEED)

Press FAN SPEED to select fan speed from "AUTO", "LOW"," MED" , and "HIGH”. NOTE: some air conditioners have no MED fan speed, and then the MED is regarded as HIGH.

3 Economical operation displays:

Press ECONOMICAL to display economical operation, if press ECONOMICAL again then the display disappears

4 Lock display

Press LOCK to display the icon of LOCK. Press the button again then the icon of LOCK disappears. In the mode of LOCK, all the buttons are invalid except for LOCK button.

5 CLOCK display.

Usually display the clock set currently. Press the button CLOCK for 4 seconds, the HOUR part will flash, press button ▲ and ▼ to adjust HOUR. Press the button CLOCK again, the minute part flash, press button▲ or▼ to adjust MINUTE. After clock set or clock operation, it must press CONFIRM to complete the set.

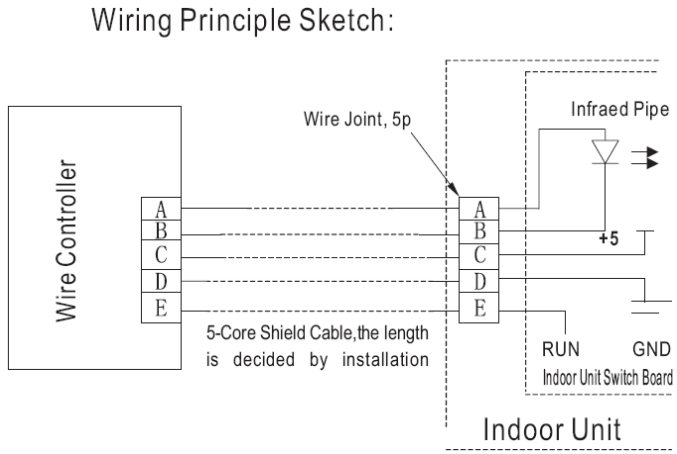
6 TIMER ON/OFF display:

Display ON at the state of TIMER ON adjustment or after only set the TIMER ON; Display OFF at the state of TIMER OFF adjustment or after only set the TIMER OFF; Display ON/OFF if simultaneously set the mode of TIMER ON and TIMER OFF.

7 Temperature display area:

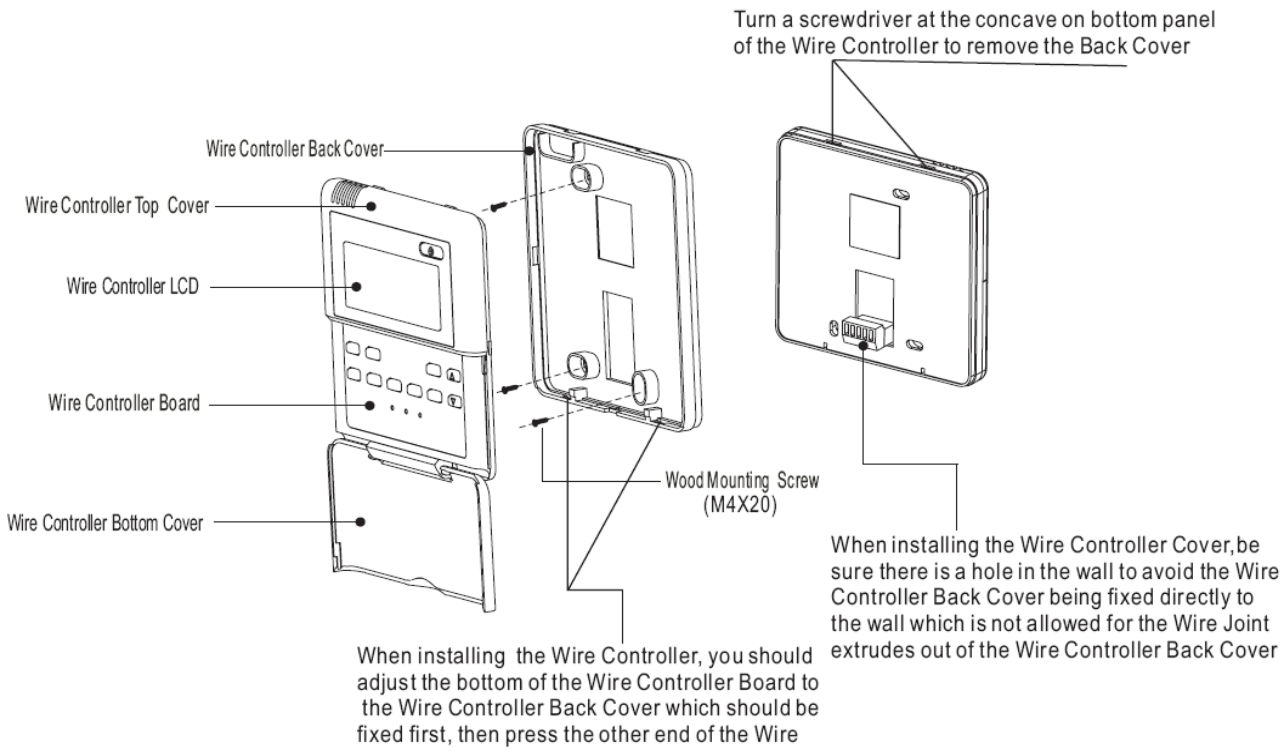
Usually display the set temperature. Press the buttons of and to set temperature, at the mode of FAN, there is no figure display in the area.

Installation



Installation Notice:

When the air conditioner needs the constant frequency wire Controller, be sure adding a Wire Joint with 5 terminal named A, B, C, D, E in indoor unit, and fixing a infrared emitter whose anode and cathode connecting with A and B near the receiver in the Indoor Unit Switch Board, then connecting the terminal +5v, GND, Run in the Switch Board to C,D,E respectively.


Turn a screwdriver at the concave on bottom panel
of the Wire Controller to remove the Back Cover
Wire Controller Back Cover
Wire Controller Top Cover
Wire Controller LCD
Wire Controller Board
Wire Controller Bottom Cover
Wood Mounting Screw
(M4X20)
When installing the Wire Controller Cover,be
sure there is a hole in the wall to avoid the Wire
Controller Back Cover being fixed directly to
the wall which is not allowed for the Wire Joint
extrudes out of the Wire Controller Back Cover
When installing the Wire Controller, you should
adjust the bottom of the Wire Controller Board to
the Wire Controller Back Cover which should be
fixed first, then press the other end of the Wire

NOTE

Never turn screws too tightly, or else the cover would be dented or the Liquid Crystal breaks.

Please leave enough long cable for maintenance of the Wire Controller Board.